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PAN AMERICAN fisherman

In This Issue . . .

- ★ Japanese Tuna Fisheries and the U. S. Market
- ★ Modern Tuna Boat Construction
- ★ The Albacore

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A YEAR
BRUARY
1954

Even a Boy can fight Communism with Truth

Kids on Radio Free Europe Send Hope To Pals Behind Iron Curtain

Twelve-year-old Karel Paces, a young Czech found in a German refugee camp, is broadcasting over Radio Free Europe to his Czech friends behind the Iron Curtain.

He is telling them familiar children's stories in their native tongue—stories now denied them by their Communist masters. These stories have a very real meaning to Karel's friends, a meaning ingrained in the folklore of their country.

Karel Paces is giving his friends, the boys and girls of his beloved Czechoslovakia, the truth of their own country and the free world. It is this truth which every American must support now so that it can be used to fight the deceit, darkness and despair which Communist tyranny is spreading through the satellite countries of Europe.

Day and night, Radio Free Europe is exposing Communist lies and propaganda, and sustaining the hope of oppressed millions that some day they will live in a better world.

At least $4,000,000 is needed this year to support and expand the operations of Radio Free Europe and Radio Free Asia. In addition, the Crusade for Freedom is seeking the signatures of Americans, on Freedom-Grams. These will be your personal pledges of hope for a free world.

This Crusade cannot succeed without your help. Your contribution is needed *now* to help support Radio Free Europe and Radio Free Asia . . . to help fight red lies with truth and to win the cold war.

Support this truth campaign now and help bring to millions the promise of future freedom.

Send your contribution to Crusade for Freedom, c/o your local Postmaster

Help Truth Fight Communism
Give To Crusade For Freedom

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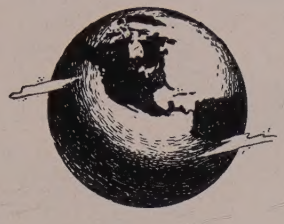
PAN AMERICAN FISHERMAN

INSURING THE PRESENT

. . . AND THE FUTURE



As In the Past So In the Future

All Activities of the American Tunaboat Association

Are Directed to Improvement and Prosperity

Of the Tuna Industry

Wade Ambrose
PRESIDENT

Harold F. Cary
GENERAL MANAGER

AMERICAN TUNABOAT ASSOCIATION

No. 1 Tuna Lane • San Diego, California

"Is it too late, Doctor?"

Sooner or later, one out of every five living Americans may ask his doctor this question about cancer.

THE answer may be: "Yes... I'm afraid so..."

But, today, the doctor can say to increasing numbers of cancer victims, "No, it is by no means too late... There is much that we can do... In fact, your chances for recovery are good."

This heartening reply reflects the great progress of medical science against cancer. And there is every reason to believe that, as the years go by, the ancient dream of conquering this disease in all its forms will be realized.

Cancer research supported by the American Cancer Society has already yielded new surgical techniques and improved methods of using x-ray and radium. More recently, research with radio-active isotopes has revealed facts about processes heretofore completely hidden in the body's cells. It has also given scientists new knowledge of hormones and certain anti-cancer drugs — thus making possible more effective control of some types of cancer.

Part of the money you donate will support research that may save millions of lives. Won't you give — and give generously — so that sometime in the future doctors may never have to face another patient and say: "I'm afraid it's too late?"

Remember: Cancer can strike anyone, but you can strike back. There's hope — if you give for research and the other vital activities of the American Cancer Society.

HELP SCIENCE HELP YOU

Join the 1950 Crusade of the

American Cancer Society

MAIL YOUR CHECK TODAY TO
"CANCER" IN CARE OF YOUR LOCAL POST OFFICE

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BRIANT SANDO—Editor and Publisher

ROBERT K. LAWSON
Associate Editor

BRANCH OFFICES

WASHINGTON 6, D. C.
744 Jackson Place, N.W.
JOHN HARMS
Telephone National 8-4123

SAN DIEGO 1, CALIF.
206 Broadway Pier Bldg.
ROBERT K. LAWSON
Telephone Belmont 3-7328

STAFF PHOTOGRAPHERS
Busco-Nestor Studios

ADVERTISING REPRESENTATIVES

Richard S. Meyer
3137 Kelton Ave.
LOS ANGELES 34, CALIF.
Telephone Bradshaw 2-1456

A. S. Babcock Co.
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About This Issue . . .

Fish are where you find them, they've been saying for years. But where do you find 'em? That old question may be coming up with a new answer that's startling. Read about the "New Sonar Device" on page 12 and in the "Publisher's Page" on page 9.

*

That all-around expert on fishery matters, Dr. W. M. Chapman, tells about "Japanese Tuna Fisheries and the United States Tuna Market" on page 10. An additional chapter on the same subject will appear in our next issue.

One way to reduce tuna boat losses and "Keep 'em fishing" is to follow the guides to "Modern Tuna Boat Construction"—as set forth on pages 14 and 15.

*

Another well known man in the industry, Mason Case, writes about "The Albacore" on page 18. This will be followed, next month, by a story on "The Yellowfin."

*

"Ebb n' Flow" on page 16 and "Tides of the Industry" on page 13 will help every reader keep posted.

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Treaty Session In Washington

The California tuna industry was well represented, according to plans for an organization meeting of the North Pacific Fisheries Treaty Commission in Washington, D. C. The pact binds the U.S., Canada and Mexico to a set of rules for commercial fishing in the North Pacific.

San Diego and San Pedro fishing industry leaders are vitally concerned with this treaty and how it is to be administered, since albacore fishing operations are to be regulated by the pact. Much of the Japanese albacore catch is exported to the U.S., in competition with the Southern California industry.

Among those in attendance: Harold F. Cary, manager of the American Tunaboat Association, San Diego; John Real of the San Perdo Fishermen's Cooperative; Montgomery Phister, president of the California Fish Canners' Association, and Donald P. Loker, San Diego-San Pedro cannery executive.

Up to our press time, President Eisenhower had not yet named U.S. members of the group. Canada and Japan each has selected four members. Appointment of American representatives on the commission has been delayed partly by a contest for one of the seats between Loker, backed by Southern California fishing industry leaders, and Milton Brooding, an official of the California Packing Co., San Francisco, supported by northern California.

Tuna Company Squabble

Mariano Crivello, founder of a million-dollar San Diego tuna firm, Sun Pacific, Inc., has entered suit charging his son Jack with mismanagement as president of the firm.

The older Crivello joined with Kenneth J. Berglund of the Westgate-Sun Harbor Co. in asking for dissolution of the Sun Pacific corporation or sale of their stock in the corporation to Jack Crivello at an appraised price.

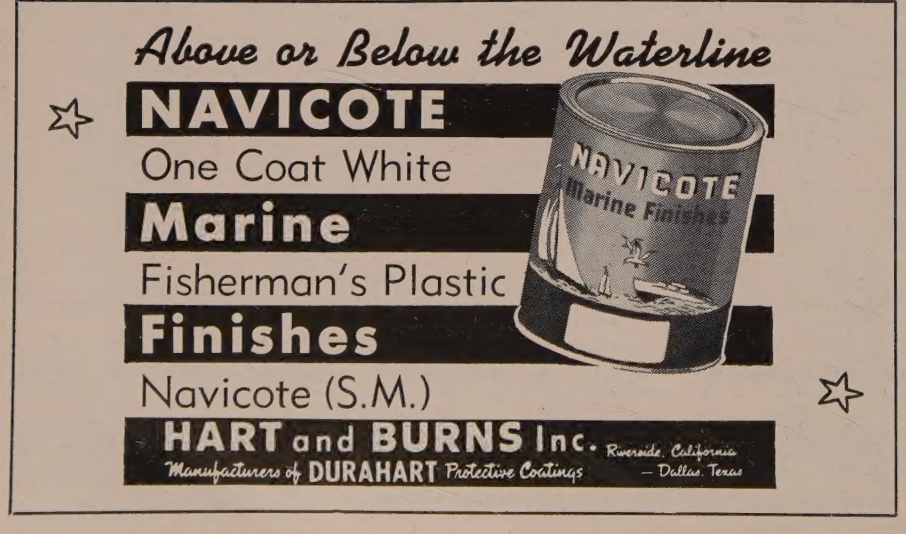
The complaint maintains that Sun Pacific has lost $1,250,000 in the last two years. It says Jack Crivello has made a secret profit from certain transactions and also sunk more than a million dollars of corporation money into foreign investments of doubtful value, including a Peruvian cannery.

The Pacific Salmon

A circular entitled, "The Pacific Salmon," was recently issued by the Fish and Wildlife Service. This leaflet describes briefly the life history of the five species of salmon native to the Pacific coast from San Francisco to northeastern Alaska.

Although natural reproduction is desirable because of its economy, the hatchery is becoming increasingly necessary to maintain the resource where natural reproduction has become wholly or partly impossible. Diagrams showing the natural life cycle of salmon and the hatchery contribution and a typical salmon hatchery are presented—along with other interesting facts.

Copies of "The Pacific Salmon," Circular 25, can be purchased for 5 cents from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.



Institutional Market Important

"Half a million eating places of all kinds, serving 65 million meals a day, furnish a market of tremendous importance," the Florida Canners Association was told at a recent meeting. According to the director of marketing of the can manufacturer's institute, "people spent $1 out of every $4 paid for food in 'eating out'."

This institutional market has tripled since 1940 and now represents a 15 billion dollar annual food business done through restaurants, hotels, cafeterias, soda fountains, hospitals, and other mass-feeding establishments.

Can manufacturers are working on a program to help canners promote sales with those who serve away-from-home consumers.

According to a study made among 180 wholesale grocers selling to institutions, the following answers were given to the question, "which do you find more profitable, selling to retail stores or institutions?" Fifty per cent stated institutions; 24 per cent, retail stores; 18 per cent, no difference; 5 per cent, don't know; and 3 per cent did not answer.

The reasons offered by those who preferred institutional selling were: better mark-up, not as competitive, larger dollar volume, heavier buying, fewer deliveries, and direct sales.

Although these statements were made at a cannners' meeting, it is apparent that just about the same can be said for distributors of most foods, including fishery products. The fish-cookery demonstration program carried on by the U.S. Fish and Wildlife Service for the past several years has proved conclusively that fishery products, canned and frozen, can gain a greater market in the institutional field.

Tuna Grows Fast

The fantastic growth of yellowfin tuna was revealed for the first time to marine biologists of California Department of Fish and Game last month when a yellowfin tuna tagged off the Gulf of Guayaquil, Peru, in 1952, was brought into San Diego. The tagged tuna grew more than one inch a month and gained more than two pounds a month in the 372 days elapsing between the time it was tagged and caught again. This is the first concrete information on the growth rate of tuna.

Report from **Washington**

Gleaned from the Nation's Capital by John Harms

TUNA BILLS IN CONGRESS.--California congressmen are leading the way as backers of bills calling for tariffs for tuna this Congressional session.

Tuna bills awaiting action to provide tariffs or quotas or both on imported tuna fish in any form are (in numerical order):

H.R. 93, by Rep. Scudder of California, provides a 5 cents-per-pound duty on fresh or frozen tuna whether or not packed in ice, or "whole, or beheaded or eviscerated or both, or filleted, skinned, boned, sliced, or divided into portions, . . ."

H.R. 4945, by Rep. Utt of California, calling for a 15 per cent ad valorem duty on tuna imports up to 15 per cent of the annual U.S. consumption based on an average consumption of the previous three years. Above this quantity, the duty would be 30 per cent ad valorem.

H.R. 6261, by Rep. King of California, raises the duty from 12-1/2 per cent to 45 per cent ad valorem on all processed tuna. At present, the duty is 45 per cent only on tuna oil-packed in cans.

H.R. 6348, by Rep. Utt of California, similar to H.R. 6261, provides for 45 per cent duty on processed as well as canned oil-packed tuna.

H.R. 6546, by Rep. Wilson of California, perhaps the most far-reaching of all . . . ups the 5 cents duty in Rep. Scudder's bill to 6 cents and would limit the total quantity of all tuna coming into the U.S. as well as tuna coming in from ports of the American Republics.

These bills are left over from last session when they were pushed aside to clear the decks for the general fight over taxes and last session's one-year extension of the Reciprocal Trade Act.

And there could still be considerable postponement again this session, depending on how quickly this year's tax legislation controversy and the whole question of foreign trade, which includes tuna fish trade as well, is settled.

Once the decks are cleared, however, the bills will be certain to get strong backing. That much will be insured by Representative Utt and King, sponsors of two of the bills, who are also members of the powerful Ways and Means Committee, which will decide the fate of the bills.

--o--

WHY THE BILLS WILL HAVE TO WAIT.--The House Ways and Means Committee won't take up legislation calling for duties on the importation of tuna or any other commodity until it has had a chance to study the recommendations of President Eisenhower's Commission on Foreign Economic Policy.

That could be as far off as April, committee spokesmen tell us. Reason is that a battle over taxes which the committee is now considering may be that long in the making . . . and, for that matter, the final form of laws on taxing might be as important in their effect on increased opportunities for the tuna fishing industry as on tariffs.

Then, White House aides and advisors have also had to study the report, released just last mid-month, in order to prepare the President's recommendations to Congress on foreign trade.

--o--

STATE OF THE UNION AND FISHING.--President Eisenhower took note of the fishing industry in his State of the Union message. He assured Congress:

"In addition we shall continue to protect and improve our national forests, parks, monuments and other natural and historic sites, as well as our fishery and wildlife resources."

--o--

PREDICTION.--As predicted by Pan-American Fisherman, the final Randall Commission report itself was riddled with dissent and controversy. And over 40 Congressional objections to a so-called "majority" portion of the document have been registered.

The reason for this, as pointed out here, was that the "same old controversy has simply been carried on inside the commission. . . protectionists among the group charge Randall is 'too liberal' . . . Randall feels they are too 'protective'-minded."

Brief general recommendations of the group were another extension of the Reciprocal Trade Act with authority to permit the President to lower tariffs by not more than 5 per cent of present rates each year of the first three years of the new act.

At the same time, there was frank recognition by the majority that "free trade" (meaning no tariffs) is not possible under the conditions facing the United States today. These are regarded here as moderate recommendations compared to the original ideas held by some of the goup.

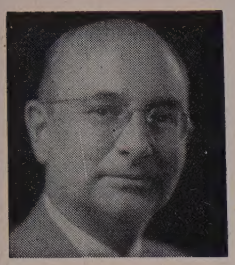
At the moment, to say whether President Eisenhower will go to bat for the Randall foreign trade program would be pure conjecture. If he goes, he'll do so square in the face of opposition by Republican Representatives Reed of New York, Chairman of the House Ways and Means Committee, and Simpson of Pennsylvania, who is a member of the Commission.

They issued a statement on the "inadequacy" of the report and said they would present a foreign trade program of their own. Both men are high-tariff minded.

As we went to press, President Eisenhower had sent copies of the report to the heads of all Government departments and agencies urging that it be studied as "a first step in the formation of a unified Administration program to be submitted to the Congress . . . the current session."

This means that the fight between "free-traders" and "protectionists," which ended in a stalemate last session, is on again. No odds on either side are being offered by the "experts" at this point.

(Continued on page 21)



The Publisher's Page . . .

Government Plans.—For the first time in years, a long-range program has been mapped out in Washington. Some people may not like it, but it at least has the merit of much study by groups of men skilled in their particular activities.

Fundamentally, the approach is sound . . . that of surveying the entire situation and charting a long-range course on such troublesome subjects as global affairs, tariffs and taxes, farm and labor problems.

In this country we have had one "crisis" after another for years, and some of them have been more imaginary than real. Now an orderly return to a peaceful and stable level seems likely.

On the international front, this country is now asserting leadership on important matters, instead of makeshift performance on the spur of the moment.

On the national scene, government spending is being reduced, war scares are diminishing, and the decline of the dollar has been halted.

Of course much more remains to be done. But this is at least a start in the right direction.

Business Plans.—When General Motors, General Electric, and other leading outfits proceed boldly with expansion plans, that's good enough for us. It's pretty safe to follow such leadership, for they have analyzed the business situation from all angles and they know the score.

It seems logical that at least the next couple of years will be good ones. Longer than that is pretty hard to judge, in the present state of the world . . . but we go along with those who say this is still a young and growing country and the biggest and best developments are still to come.

We used to think we were born too late—we missed the invention of the telephone and telegraph, the electric light, and other things our school-day books told us were the wonders of the world.

Then for a while we thought maybe we had happened along in just the right cycle after all. We were here to witness the development of the automobile, airplane, radio, TV and other current "wonders."

Now we are beginning to think we were born too soon. The atomic age is just around the corner. We hope we last to enjoy it. For that, say the experts, will make everything that has gone before seem like peanuts. Anyway, it's a wonderful life . . . and we are enjoying the trip.

Fish and the Farm Program.—Food is basic and food prices, including fish and fishery products, are largely determined by farm food prices. That is why the farm program, now receiving so much attention in the press and in the Congress, holds great interest for fishermen, boat owners, and canners.

President Eisenhower and Secretary Benson have outlined what the Administration favors as a long-range farm program. Both men realize the "farm problem" is loaded with TNT, and the Congress will go slow on major moves on account of important elections coming up in some key states this fall.

Hearings in the Senate and House are filled with divergent viewpoints—and this applies to both Republicans and Democrats. However, fishery interests are affected only indirectly by this debate; price controls or supports are being considered only for the so-called basic commmodities—wheat, corn, cotton, peanuts, rice and tobacco.

The 17-man Randall Commission is the one that carries most interest for the commercial fishing industry. Clarence Randall is a good chairman but he is finding a dilemma exists between the Administration's desire for freer trade with friendly nations and the clamor by many U.S. industries for protection.

Defenders of U.S. trade barriers are fighting hard to block moves to lower tariffs. One of the leaders in this effort is O. R. Strackbein, well known in this industry, who has long been associated with various protectionist organizations. Out of the present battle royal will probably come some sort of compromise.

New Way to Locate Fish.—The tuna clipper Sun Ray recently berthed at San Diego after a historic 75-day voyage to South America, during which it made successful experimental use of a radarlike electronic sounding device installed on a tuna boat for the first time.

Capt. Bill Vlyman said the $85,000 load of almost 300 tons was actually caught in only nine days of fishing, due to the ability of the sea scanner to locate schools of fish at a considerable distance from the vessel.

The device transmits electronic sound waves which bounce back from objects in the water and are shown on a glass screen in the pilot house. The device is said to locate fish over a horizontal radius and is capable of scanning to a depth of 600 feet.

Some pretty smart fishermen are predicting that this device may revolutionize tuna fishing, enabling tuna boats to locate more easily the tuna schools which have been becoming more and more elusive in recent years.

Snafu.—The fish situation, being a little mixed as stated above, reminds us of the old hill-billy, Uncle Zeke. One day he was working hard with a stub of pencil and some paper. Suddenly he jumped to his feet with a shout.

"Mandy," he cried, "doggoned if I ain't learned to write."

Mandy looked in awe at the scrawled lines.

"What do it say?" she asked.

"Cain't tell," said Uncle Zeke. "I ain't learned to read yet."

BRIANT SANDO

JAPANESE TUNA FISHERIES AND The United States Tuna Market

By W. M. CHAPMAN
Director of Research
American Tunaboat Association

THERE are four separate Japanese tuna fisheries, each of which bears a different relationship to the United States tuna market. These are: (1) the two albacore fisheries, one in the winter by the long-line method, and the other in the spring by the bait boats; (2) the mothership fishery for both yellowfin and big-eye; (3) the bait fishery for skipjack; and (4) the long-line fishery by independent vessels for yellowfin, big-eye and bluefin tuna.

Albacore

Albacore are caught for the United States market, and not for the Japanese market. Rather large volumes of albacore can be disposed of on the Japanese market, as was done in 1952, chiefly in the form of *namaribushi* (half-dried sticks) but the prices are not sufficiently high to encourage the growth or even the existence of a large and prosperous fishery. The price which has established and furthered the Japanese albacore fisheries is determined by the U. S. tuna market.

Albacore reaches the United States market by two channels that are quite separate financially, politically and diplomatically. One is in the canned form, processed in Japan and sent here ready for marketing. The other is in the frozen form sent here for processing by the American canners.

These two separate channels form two separate markets for albacore in Japan, both operated exclusively by the Japanese, although they may or may not be acting as agents for American firms. One of these markets is represented by the purchasing power of the Japanese canners, the other by the purchasing power of the Japanese exporters of frozen tuna. Both are strongly organized into effective associations.

The two groups were organized into the Council on Tuna Exports, with the tacit blessing of the Japanese Government, primarily to combat our tariff campaign and to prevent another such campaign from arising among us.

The Council on Tuna Exports broke up last fall when the Japanese canners withdrew from it for two main reasons. First, pressure from U. S. tariff activity had relaxed to the point where it was no longer a serious threat either to the Japanese canners or exporters of frozen tuna. Second, extremely strong competition between the Japanese canner and the Japanese frozen tuna exporter for albacore during the spring of 1953, and the likelihood of its repetition in 1954.

By mid-December 1953, the two groups were once more working together tentatively and had devised a plan to divide the winter albacore catch on a mutually agreeable basis.

All albacore landed in Japan (as with all other tuna except that brought in by motherships) is sold at public auction, the price varying from day to day and often from boat to boat. This is a matter of law as well as custom. Even if a Japanese canner owns a tuna boat (and the processor ownership of tuna boats is even less percentagewise in the Japanese fleet than in our fleet) the catch of that vessel goes over the public auction block and there is little or no collusion in the buying.

The albacore fishery starts in mid-December and ends in mid-July. The fishery from mid-December to April is conducted by long-line out in the open North Pacific, ordinarily far from land and covering most of the western half of the North Pacific. The fishery from April through July (the so-called summer fishery) is conducted by bait boats relatively close to the home islands of Japan. The two fisheries are quite separate in many respects.

The yield of the winter long-line

fishery is relatively stable from year to year; the yield of the summer bait fishery fluctuates widely from year to year. In the years 1947 through 1950 the winter fishery produced about 60% of the annual catch. In 1951 and 1952 the tonnage landed by the winter fishery stayed about the same as in former years, but the yield of the summer fishery jumped sharply. In 1952 the winter fishery produced about 14,000 tons while the summer fishery produced about 47,000 tons, of which 37,000 tons (or nearly 60% of the year's total catch of albacore) was taken in the month of June alone.

At the beginning of 1953 the bidding for albacore in Japan was strong. The Japanese canners planned to pack 1,500,000 cases; American canners wanted as much albacore as they could get in the frozen form. The December, January, and February catch was actually up pretty well from former years and the outlook was promising for a better year than the record season of 1952.

The Japanese canners therefore relaxed buying somewhat, planning to fill their requirements at a cheaper price out of the big June catch when the summer fishery got going. The April catch was about the same as 1952, the May catch was a thousand tons under that for 1952, and the June catch turned out to be only half as large as in 1952. Accordingly, the Japanese canners got caught short. As the short catch began to shape up they came back into the market heavily, but so did the frozen tuna exporters.

The upshot of this was that: (1) the Japanese canners packed less than 900,000 cases of white meat tuna instead of the 1,500,000 cases they had planned for and this at so high a raw material cost that they made little or no profit; (2) the Japanese frozen tuna exporters had to bid so high for the albacore that they made little or no profit; (3) the Japanese albacore fishermen, despite short catches, operated at a handsome profit: (4) imports on canned white-meat tuna rose only slightly about the preceding year, while imports of frozen albacore reached new record heights; and (5) the price of Japanese frozen albacore delivered in the United States rose from about $400 per ton at the first of the year to $430 per ton or more for the June and July catch.

This situation stimulated a vigorous political reaction within Japan. The Japanese canners wanted to guarantee a source of raw material adequate to permit them to fill their expanding market for canned white meat tuna in America. The Japanese frozen tuna exporter had the same desires with respect to the same market. With a limited catch of albacore to split between them, they could not agree on how it should be split.

The canners introduced legislation into the Diet to restrict all exports of frozen albacore from Japan until one million cases were canned. This legislation got nowhere. While the Japanese canners are stronger politically with the Executive Branch of the Japanese Government than the frozen tuna exporters, they hold no such advantage in the Legislative Branch of the Government, the Diet.

Accordingly, the issue was settled strictly on economic grounds. Both sides had approximately equal bidding powers for albacore on the auction. They bid each other into non-profit positions, with the frozen tuna exporters winning the battle for volume chiefly because of better timing.

The situation at the beginning of 1954 looks much the same. The Japanese canners have raised the price on their canned goods in the United States. They have received cuts in their cost of cans and some other costs. The frozen tuna exporters received a cut in their freight costs to the West Coast of the United States, first from $61.75 per ton (1952 rate) to $55 per ton, and then on December 1 to $45 per ton.

The relative advantage these changes give to each side will not be apparent until the bidding for albacore gets well under way. The prices being paid for albacore from the vessels in December was $360 per ton with trade estimates that it would go to $380 per ton later. This is equivalent to a price of about $470 per ton delivered here. How the price will hold depends on factors not now known.

The catch of albacore in Japan in 1951 amounted to about 30,000 tons, and in 1952 to about 63,000 tons. The final figures are not in yet for 1953, but will be a little less than 50,000 tons. Of this amount about 30,000 tons arrived in the United States in the frozen form and a little less than 900,000 cases (roughly 18,000 tons in the raw state) in the canned form with the ratio about 9 to 1 in favor of brine pack.

The Japanese say that the 1952 catch of 63,000 tons of albacore represented the best fishing year on record . . . and not expected soon again. They say a catch in the neighborhood of 50,000 tons (as last year) is a good average year. The only new albacore grounds they have immediate prospect of opening up is off southwest Australia. This is now just in the exploratory stage. Expansion of the catch from the North Pacific cannot be expected except by the gradual process of fleet enlargement on present grounds.

Mothership Expeditions

The use of mothership expeditions in the tuna fishery is a postwar phenomenon. It was originally brought about by SCAP permitting no Japanese tuna vessels to go south or west of the MacArthur Line except as a part of mothership expeditions. From June, 1950, to November, 1951, nine such expeditions operated. They produced 19,000 tons of tuna in total and were of varying success financially

In 1952 there were only two mothership expeditions; in 1953 there were three, one of which was on a quite modest scale. The largest of these had as mothership a large vessel, the "Tenyo Maru" whose principal function is in the Antarctic whale fishery. The second largest was the "Saipan" which went into operation in July. The third was a 500 gross ton trawler pressed hurriedly into service to replace a larger vessel which had been lost in the Antarctic during the winter.

(Continued on page 25)

In New York harbor a diesel-powered tug leaves its berth for a trip around Manhattan Island to demonstrate the underwater searching device. Marine industry officials and naval experts watched it chart the harbor bottom and shoreline contours during this public demonstration.

New Sonar Device SCANS Under Water

A new sonar device that fulfills the long-time dream of fishermen and marine pilots to be able to "look around" under water and "see" ahead and to the sides of their boats, as well as directly underneath, was demonstrated recently in New York's harbor by Minneapolis-Honeywell Regulator Company.

The device is a new type electronic echo-sounding instrument with a revolutionary engineering feature that permits it to scan under water like a sweeping searchlight. In a public demonstration, it charted the contours of the harbor and channels, picked up such underwater objects as pilings and buoys, and displayed its ability to "find fish."

Appropriately called the Sea Scanar, the device operates like radar but uses bursts of high-frequency sound waves instead of radio signals to probe the underwater depths.

In principle, it is similar to the well-known depth sounders. However, unlike depth sounders which "look" only in one direction — usually straight down under the boat—the new Honeywell instrument automatically sweeps back and forth at any desired depth, peering ahead and to the sides and giving a panoramic view of everything within its range.

Its scanning eye can "see" out into the water for more than a quarter of a mile (1,600 feet), but also operates at 800 and 400-foot ranges. It can scan the entire 180-degree area from port to starboard, or if desired can be pin-pointed to sweep a 90 or 45-degree area. The scanning can be done at any depth from the surface of the water to the bottom.

Whatever the instrument "sees"—whether it be fish, whales, underwater obstructions or the contours of the bottom or channel—is shown on a radar-type screen mounted in the pilothouse or other convenient location. In addition, the Sea Scanar has an audio feature that enables the presence of underwater objects to be identified by "pings" of returning echoes.

The device, developed by the company's marine equipment division in Seattle, can be operated almost as easily as a television set. In fact, the viewing screen and control knobs are mounted on a panel that looks somewhat like the front of a small television set.

W. J. McGoldrick, Honeywell vice president in charge of engineering, said the development would be of tremendous value to navigation on inland and coastal waters, and would "open up a whole new underwater world" for fishermen.

"Although man has been casting his nets upon the sea since Biblical days, fishing still is one of our most speculative occupations," McGoldrick said. "The big gamble always has been to find the fish. Such scientific aids as depth sounders have helped, but only in a limited way.

"Now, for the first time in marine history, fishermen have an automatic scanning device that enables them to locate schools of fish, not by passing over them, but by reaching out and finding them ahead or to the side of the boat where their movements can be determined and nets set in time to catch them."

The Sea Scanar does more than find fish; it shows the distance of the school from the boat, how deep the school is, its approximate size, which direction it is traveling and how fast. Thus the fisherman no longer has to guess—he can tell precisely when, where and how to set his nets for maximum catches.

Although the Sea Scanar is fully automatic, it can be operated manually to "track" schools of fish or other objects moving under water. This is done by simply flicking a switch and then turning a control knob to direct the sound waves toward the fish. It's much like a machine gunner firing at a moving target.

When used as a navigation aid, the ability of the instrument to "look" out to each side permits pilots to navigate close to shore with safety, particularly at night or in fog. In addition to measuring depth beneath the boat, the device gives a clear picture of channels, and picks out sand bars, shoals and all other underwater hazards in time to avoid them.

The instrument "sees" by means of high-frequency sound waves. These sound waves are fired out or down into the water in a narrow beam from a transducer mounted on the bottom of the boat. The secret of the instrument's scanning is the ability of this transducer to sweep back and forth automatically. When the sound waves strike objects having a density different from that of water, portions are reflected back as echoes, magnified electronically and translated into signals.

TIDES OF THE INDUSTRY

American Samoa Tuna Cannery

Commenting on the operation by a U. S. company of the American Samoan tuna cannery, a recent editorial in the Japanese press (Nippon Suisan Shimbun) stated in part:

"Japanese tuna boats are now fishing in the waters around the Samoa Islands. The value of the fishing grounds of that area was established by Japanese fishing boats before the war, but since then it has been practically impossible for them to operate there because of supply problems associated with the lack of bases. Now, however, the sale of fish to the cannery in Samoa has been arranged and the catch is to be turned over to a freezership belonging to the canner, which will at the same time supply necessary materials . . . Of course, large tuna boats would be able to operate independently, but the fact that medium and small tuna boats now operate there is important in the present condition of Japan's fisheries.

"The fisheries authorities have set up their policies for the conversion of fisheries with emphasis on the southern fishing grounds, to which area they will divert about 100 mackerel fishing boats and other vessels which have been closed out of their grounds by the Rhee Line around Korea. However, there is a limit to the southern tuna grounds and so . . . it is to be hoped that one further step forward will be taken and that bases may be established in the South Sea Islands."

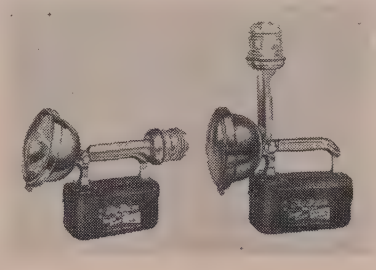
King Salmon Research In California

A recently completed controlled-flow experimental stream has advanced natural propagation studies of king salmon at Mill Creek, California, being carried out by the IWS Branch of Fishery Biology in cooperation with the California Department of Fish and Game.

The stream has been created in the old north fork of Mill Creek at Los Molinos, which had been dry until recent years brought high-water conditions. The channel has been deepened and the water flow controlled by a gate at the head of a 30-inch culvert through an earth-fill dam at the channel head.

A study is being made of the early life history of king salmon. Experiments last year on egg survival in Mill Creek resulted in a severe egg loss because of extreme flood conditions. In present studies, plastic screen bags containing fertilized eggs were planted in November and will be periodically removed for comparison of survival conditions in Mill Creek and in the controlled-flow channel.

Through use of the control area, biologists hope to measure the influence of flooding and other factors on salmon production each year. Future studies will include experiments on spawning density, optimum ratio of maleto female spawners, and other phases of the life history of king salmon.



Portable Hand Lamp with Flashing Red Beacon

A new combination portable electric hand lamp and flashing red beacon has been added to the Big Beam line of hand lamps, electric flares, and automatic emergency lights produced by U-C Lite Manufacturing Company, 1050 West Hubbard Street, Chicago 22, Illinois.

Available in both sealed beam and standard bulb type, this new model features the Big Beam exclusive two-position flashing beacon. Because the lamp and beacon operate either independently or together, the Beacon Lamp can be used as a hand lamp only, as an emergency or signal light only, or as a combination of these two.

Frozen Tuna Imports Gain

Imports of frozen tuna into the U.S. are up sharply over 1952 totals, according to U.S. Census Bureau.

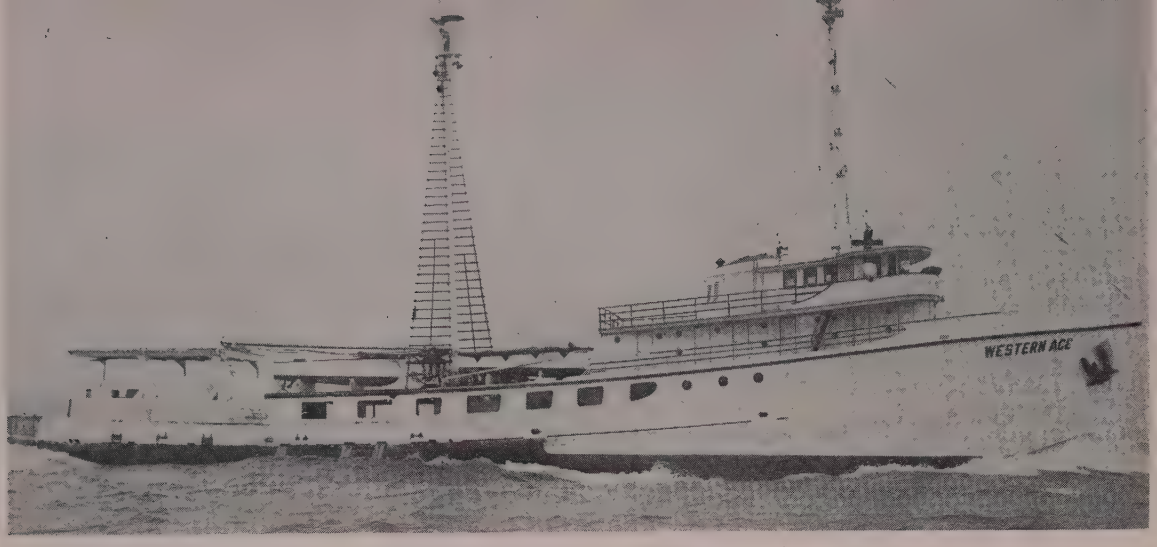
Total frozen tuna imports were 69,002,492 pounds in 1952, while 92,890,457 pounds were imported in 1953 up to Dec. 1. Canned tuna imports are also higher, with 28,488,-653 pounds of brine-packed tuna brought in during 1953 up to December, against 19,032,530 for all of 1952.

Asked about the effect of imports on the California tuna industry, Harold F. Cary, general manager of the American Tunaboat Association, said: "Production in 1953 was below normal, thus an almost-inevitable collision because of greatly expanded imports was averted.

"An additional safety factor was increase in sale of canned tuna resulting from vigorous promotion by U.S. canners. Early landings in 1954 show a return to normal; should this continue, and imports continue their uptrend, a probability of serious difficulty can be forecast for 1954."

Selling Sardines

The Maine Sardine Industry is coming to California with part of their extensive advertising and promotion campaign. This includes sponsoring lovely Jackie Lee in the "Miss Universe" beauty contest at Long Beach, Calif. To show her appreciation, Jackie dropped in at the world-famous Farmers Market in Los Angeles as shown above to make sure the shelves are well-stocked with her sponsor's products.



The modern tuna clipper is good looking and capable of covering great distances safely.

Modern Tuna Boat Construction

THE story behind the design of the modern tuna clipper is the story of the tuna fishing industry itself and of its development through the years. The tuna clipper is one of the largest and most complex and most romantic of the fishing vessels of the world.

In the early days of tuna fishing off Southern California before the 1920's, fishermen learned to attract the schools of tuna to their boats by throwing out live bait, either small sardines or anchovies. The tuna would churn the water in their excitement for the bait and sometimes would strike at feathered hooks held on a short line at the end of a bamboo pole.

These feathered hooks were made to resemble squids when played in the water, and often the frenzy of the tuna become so great they would strike at the bare hook splashed in the water. Hooks were left barbless to facilitate removal of the tuna, and to enable the fishermen to return them to the water more quickly for another fish.

When they got into schools where the tuna were too big for one man to lift aboard, two poles were attached to a bridle with a single hook, and two fishermen working as a team heaved them aboard. For bigger fish, three-pole teams were used, or even four-pole teams.

This method of fishing still remains one of the most effective ways of catching tuna; and around it revolves the whole design of the modern tuna clipper.

Portions of this article have been excerpted or re-written from a paper prepared by James F. Petrich, Naval Architect, Western Boat Building Company, for the International Fishing Boat Congress, during 1953 in Paris, France and Miami, Florida.

Evolution

The first tuna clippers had design requirements that were quite simple. Almost any kind of a boat could take the fishermen daily out a few miles to where the fish were running and bring them back again in the afternoon with their small catches of fish on deck. A small wooden box through which sea water was pumped was installed on deck to carry the live bait needed for the day's fishing. The added weight of the deck box lowered the stern so that the fishermen standing there close to the water level could conveniently fish with a pole and line and hook.

Thus the first tuna clipper had as its distinguishing mark a low freeboard at the stern, and in all subsequent development this distinguishing mark has remained. It is vital to the efficient operation of the tuna clipper on the fishing grounds.

Since those early days the tuna fishery has expanded to include not only the waters off the Southern California coast but the waters off the West Coast of Mexico and Central America and the Northwest Coast of South America, as far as 3,000 miles from the home ports of San Diego and San Pedro, California.

The fishing boat has developed from the small flush deck launch, without living accommodations and able to make only daily trips out of port, to the modern high seas tuna clipper able to travel 10,000 to 12,000 miles, and ranging in size from 90 to 169 feet in length, able to carry huge quantities of live bait as well as the diesel fuel oil and provisions needed for the long trips, and with capacity to bring in 130 to 630 tons of refrigerated fish.

Modern Clippers

The modern high seas tuna clipper is a good looking, even yacht-like appearing vessel, with a raised deck forward reaching back well past amidships. The stern is low in the water, with the main deck aft being awash much of the time. Around the stern are the steel fishing racks hung outside the main deck rail and extending forward on the port side to the beginning of the raised deck.

There are usually three deck boxes on the stern, in line fore and aft and set inboard of the main deck to allow four or five feet passage way at the sides and around the stern. Over the deck boxes is a canopy strong enough to withstand the impact of a flying fish hook and used to protect the

"chummer" at his station atop the boxes. Forward of the deck boxes about amidships is the single mast and boom used to life the power tender and bait hauling skiffs carried on the raised deck.

Atop the mast is the covered crow's nest large enough to seat two men. Ahead of the mast is the deck house with accommodations for 10 to 20 men in rooms that extend the full width of the house. Above the deck house is the pilot house and chart room and behind them the stack.

The modern tuna clipper is of either steel or wood construction. Steel construction gained in popularity after the end of World War II, because it provided greater available space within the vessel and its cost did not rise as rapidly as that of wood. However, there seems to be a recent trend back to wooden vessels . . . partly due to corrosion problems characteristic of steel vessels in tropical waters.

The hull and houses are painted white, the deck boxes and working spaces aft are usually gray, and the guards and rails stained their natural finish.

Machinery

Below decks is the maze of machinery to operate and propel the complicated tuna clipper, and also the hold which is divided into water-tight compartments. The engine room below the main deck is well forward, just aft of a large fuel oil tank in the bow. From the engine room aft leads a full-height shaft alley flanked on either side by the eight to 16 water-tight wells used to carry fuel oil on the outbound trip and refrigerated tuna cargo on the homeward voyage. Aft of the wells in the very stern are tanks for carrying fresh water and more fuel oil.

In the engine room, besides the single main diesel propulsion engine, there are installed two large diesel-driven generating sets as well as two large bait water pumps, bilge and fire pumps, fuel oil transfer pumps, lube oil tanks and other auxiliary machinery and equipment. The shaft alley contains, besides the propeller shaft, the brine circulating pumps and piping, and the complex ammonia refrigeration lines for each well and deck box.

Above the engine room in the 'tween deck space is the upper engine room containing the main switchboard, the ammonia refrigeration compressors, air compressors and air bottles, the engineer's work bench, CO^2 fire fighting equipment and other such machinery. Forward of this space is the forecastle space for ship's storage. Aft, two water-tight doors, one port and one starboard, lead to the open 'tween deck space.

This area contains the hatches to the wells below decks through which the fish are loaded, and in the center of this space just aft of the engine room bulkhead is the galley cabin. The open 'tween deck space may be enclosed with storm doors to give protection from severe weather.

The tuna clipper uses only heavy-duty diesel engines and machinery. Reliability in operation is the measure of its popularity, for where the clippers travel there are not service shops nor parts houses. When they are thousands of miles from port, much depends on the continuous operation of their machinery—perhaps a $100,000 catch; a $300,000 or $400,000 vessel; and, more valuable their lives.

As the tropical waters where they operate are particularly corrosive, monel fastenings are used on underwater fittings, copper nickel heat exchangers are installed, monel pump shafts and monel tail shafts are used. The largest monel tail shaft in the world is installed aboard a tuna clipper. Oversize electric motors are installed on important pieces of machinery as a precaution against overheating.

Trim

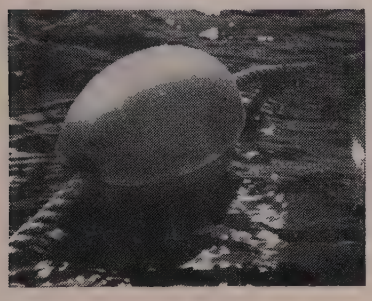
When 12 men fish in the racks on a good school of tuna, they can toss fish behind them onto the deck faster than a man can count, perhaps 15 or 20 tons per hour, filling the deck space to the top of the rail. For such work the fisherman must not be too high off the water, or he will be pulled off balance. On the other hand the rail must not be too high or he will not have the necessary support when he leans backward to drop the fish to the deck; and lowering the rail height would also eliminate necessary fish space on the deck behind him.

The best arrangement is to have the racks at the same level as the deck, with the rail of sufficient height to support the fishermen and at the same time permit the loading of at least 15 tons of fish per school on the deck. To accomplish this the ship must be trimmed with just a few inches of freeboard at the stern. The designer must calculate closely his displacements and weights and tank capacities to obtain this condition of trim during the entire time the vessel is fishing.

The term "safe and seaworthy" might seem incongruous with but a few inches of freeboard, but in a real sense the low freeboard tuna clipper design is no more dangerous than the low freeboard oil tanker plying the

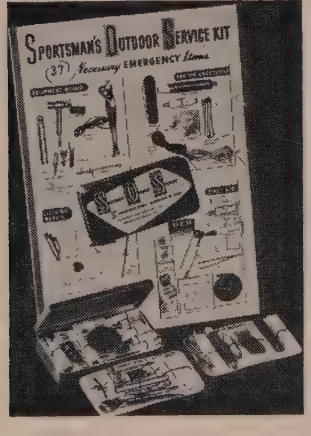
(Continued on page 23)

EBB 'n FLOW



Fish Net Floats

The Spongex Plastic Fish Net Float comes in different sizes and shapes. Illustration shows an oval float in the water. Even in small lots the smallest float, 2 in. diameter by 3 in. thickness, will cost the fisherman only 8c each, and the largest 6 in. diameter by 7½ in. thickness about $1.40 each. These prices are claimed to be an outstanding feature of these new floats. Made by the Sponge Rubber Products Co., Shelton, Conn.



Sportsman's Outdoor Servicekit

The Servicekit is designed to give the sportsman a complete pocket pack that will enable him to handle various emergencies on trips.

It contains equipment for repair of gear and health first aid packs. May be placed in hunting or fishing pocket and left there. It will always be together and ready.

The outdoor Servicekit weighs only ten (10) ounces. Low cost $6.95. For trial order or complete information write to the General Scientific Equipment Co. , 2700 W. Huntingdon St., Philadelphia, 32, Pa.

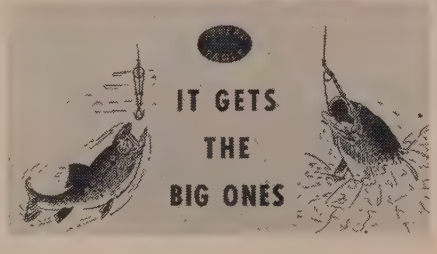
Fisheries on TV

Here is an idea from the East that might be applied to some of the Western fisheries:

A series of one-half hour TV lessons on the fisheries of Chesapeake Bay is being presented by the Baltimore (Maryland) Department of Education. This is part of an experiment to determine the value of TV in the classroom. Twenty-three television sets have been provided to the Baltimore schools for this purpose. The programs have been planned for the general public as well as for the school pupils.

Four topics are included in the series: (1) the oyster; (2) fishes of Chesapeake Bay; (3) the bay country; and (4) the blue crab. Much illustrative material has been assembled for the television program, together with a comprehensive working study of the respective topics.

Numerous city and state education departments are conducting or planning TV programs as a part of the curricula in geography, history, economics, and citizenship. The U. S. Fish and Wildlife Service's branch of commercial fisheries has available, on request, copies of three educational fishery films for television showing. These are on the Maine sardine industry, menhaden fishery, and the use of fish in school lunchrooms. In addition, service home economists and marketing specialists are available for TV demonstrations on the proper handling and cookery of fish and shellfish. A number of these demonstrations have already been given.



"Spread Eagle" Hook

A hook that sets itself when fish strike and which holds the fish regardless of slack in line, is now being manufactured by Sealtight Corporation, Cedar Rapids, Iowa. The "Spread Eagle" eliminates the worry about when to set the hook; when fish strikes, the hook is set. It permits fishing around drifts and rocks, as the Spread Eagle usually releases itself when snagged. It can be used for all game fishing, fresh or salt water; for casting, trolling, still and set lines. Any bait may be used with it. Made of high grade steel wire with needle point, and practically impossible to break while fishing.

New Bendix Instruments

Three new Bendix marine instruments, including two depth recorders and a new automatic pilot, are now being introduced along with other products in the line by Pacific Division, Bendix Aviation Corporation.

One of the new models is the DR-12 Bendix Depth Recorder which has a 2-stage recording feature of 0-50 fathoms and 0-200 fathoms.

Another is the new DR-10A Depth Recorder, a small, compact instrument well within the price range of every pleasure boat owner or operator of small fishing craft. The Recorder incorporates a new 3-stage range, permitting accurate recordings up to 75 fathoms.

Third new item is the new Automatic Pilot Model 125 in the low price field. It incorporates all the proven Bendix features, including the exclusive photo electric principle and contains a more powerful steering unit for accurate control under all conditions.

California Sardine Study

A progress report on the studies of the California sardine (pilchard), anchovy, Pacific mackerel, and jack mackerel has been issued by the research agencies participating in the California cooperative oceanic fisheries investigations. The report covers the fiscal year July 1, 1952, to June 30, 1953.

The work by the agencies during the period has been supported by a special tax on anchovy, jack mackerel, and Pacific mackerel landings, as well as the special tax on sardines and appropriations from the California State Legislature.

This apparent broadening of the scope of the sardine program (symbolized by the change in name from the California Cooperative Sardine Research Program) formalizes what has been recognized by scientists and industry from the beginning of the program . . . that despite the critical state of the sardine fishery there is no specific "sardine problem." The sardine problem is an integral part of the broader question of California's marine resources. The report summarizes the present situation as follows:

1. The bulk of the sardine population today is concentrated in the waters off Baja California, where it is largely unavailable to sardine fishermen of the United States.

2. There are fewer sardines in California waters than ever before.

3. There is little reason to hope that sardine fishing in the next two years will reach the level attained in the years of prosperity.

4. The most numerous year class present is that spawned in 1952, and evidence points to its being smaller than the 1948 year class.

5. Anchovy and jack mackerel populations appear to be satisfactorily abundant. Pacific mackerel catches, on the other hand, point toward a low abundance of these fish throughout California waters.

6. There are some clues as to the causes of the catastrophic decline in sardine landings, but no single primary reason can be stated. Probably a combination of several factors has brought the sardine catch to its low level, and until we can identify and measure each of the most important factors no complete explanation can be given for this or a similar crisis.

The cooperating agencies in this program include: California Academy of Sciences; California Department of Fish and Game; Stanford University, Hopkins Marine Station; U.S. Fish and Wildlife Service, South Pacific Fishery Investigations; and University of California, Scripps Institution of Oceanography.

Westgate Company Expands

The Westgate-California Tuna Packing Corp. of San Diego recently announced purchase of the Southern California Packing Co. of San Pedro California.

The purchase price was "in excess of $100,000," a company spokesman said. The plant was purchased for the purpose of providing packing facilities for sardines, mackerel and anchovies.

Boats now at sea scheduled to unload their catch in San Pedro will now unload at the Westgate docks and all future tuna packing operations of the combined companies are scheduled to be done in San Diego.

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THE ALBACORE

By MASON CASE

Chairman, Pacific Coast Fish Producer's Institute

WHILE the albacore tuna fishery is probably no more complex, basically, than the other fisheries in the United States, its individual problems make it appear so. In order to obtain a clear picture of this industry, it is necessary to include a study of the fishermen engaged in this industry; the market; the import situation; and of the fish itself.

Fishermen

The albacore fisherman is a particular breed of man. Viewed through the eyes of the canners and buyers, he is highly independent and frequently more than a little difficult to deal with. Admittedly, he is skeptical, stubborn, and possesses a constitution tough as nails. All of these factors are assets that enable him to endure great physical hardships.

His skepticism and stubbornness are caused partially by lack of business experience, but mainly from past experience of receiving the short end of the stick in most of his dealings with the market. Add to this condition a political situation that has evidenced little interest in his welfare and it becomes small wonder he frequently shows little humor.

Business Man

The albacore fisherman is generally classified as a small businessman. Yet he is faced with a double hazard by comparison — that of obtaining his product from a highly uncertain source, and of selling that product at a highly fluctuating market. Until the advent of cooperatives this year he had no guarantee of a stable price or even a market for his fish at any price.

There is a similarity between the fisherman and the farmer. Both are faced with the almost impossible problem of balancing accounts during the fluctuating market always found after wars. Food of all classifications is the first to fall in value while the machinery and labor necessary to obtain production of that food remains on a high level.

Many farmers are protected by government subsidies to cover such emergencies, but the fishermen find their costs of repairs, fuel, gear, and incidental expenses rising annually, and must shoulder this differential.

The fisherman is vitally concerned that the canner remain in business. He is further concerned that the canned product enjoy a healthy market and that it does not become competitively over-priced or in short supply. Just how he can achieve this balance and continue to remain in business in the face of high production costs is naturally one of first concern to him.

Albacore
©1952 National Wildlife Federation

Vessels

At the present time, there are some 3,000 vessels engaged in the albacore fishery, either on a part-time or full-time basis. They are represented mainly with the northern-style jig-boat and, in the minority, with the small live-bait-boat. The crews of these boats range in number from one to five, including the skipper, and each crew member does his share of the fishing as well as standing watches.

The crew members are paid by the share for the fish caught on each trip. Employment is narrowed down considerably by the mechanics of operation, since each crew member must be proficient in fishing, and also be experienced in ship-handling as well. He must also be content to take his chances on making a good catch.

Equipment

A few years ago, radios, direction-finders, and depth-finders were unheard of on this type of fishing vessel. Today the average albacore boat of about 40 feet is equipped with all of this gear. The necessity for such equipment did not arise from a safety factor but to enable the fishermen to fish far grounds in search for ablacore.

For example, this year the fishermen found themselves as far as 500 miles directly offshore in the quest for schools of fish. In making such long trips it has also been necessary to refrigerate their catches to insure a prime marketable product. The cost to the fishermen for such equipment may run from $3,950 to well over $7,000. It is not a question of comfort or safety to own this equipment; it is a matter of necessity.

Canners

The albacore fisherman looks to the canner as the partner with the business know-how. A few years ago the canners were caught with their prices up and the market down. This was due, in part, to ricidulous competitive bidding. Shortly thereafter the canner was again caught in a similar bind with a heavy influx of both canned and raw imported fish.

While the canner received a well-deserved lesson to watch the market, it was the fishermen who received the brunt of the resulting financial blow. This follows a relatively characteristic pattern in the fish business. The canner operates on a fairly well-established cost wherein irregularities in the market, or lowered revenues, are always taken from the price of the raw product.

Tuna, without doubt, is the prime seller among all fish products. Government surveys prove that it has the greatest reception. Children who are not usually fond of fish find the tuna sandwich a favorite. The market for the sale of tuna increases annually, and the saturation point is unquestionably a long way off.

Unrest

The present state of unrest, as it affects the fisherman, lies within the industry itself to a greater degree than it does between the industry and the market-public. Such a state of affairs should call for immediate and complete cooperation between the canner and the producer-fisherman. For the first time in albacore fishing history, the contracts recently made with the fishermen's cooperatives and the canners gave the fishermen some peace of mind and assurance they were approaching receipt of a fair price for their product, and the con-

fidence they could complete their trips without fear of coming in on a price-break.

This has done much to encourage friendly relations between the canner and the fisherman. With this action as a starting basis, there is no apparent reason why both parties should not cooperate on individual problems to their mutual benefit. However, tradition apparently has not lost its grip and so both sides again are at odds on the following important problem.

Imports

As matters now stand the canners want the fishermen's cooperation in the struggle to increase duties on canned tuna-in-brine. They do not, however, want to go along with the fishermen in establishing a tariff or quota on frozen imported albacore. The canner contends he needs a free hand to import frozen fish for processing here to supplement the American catch.

The fishermen willingly agree that it is necessary to have a foreign supply available to insure market requirements. They maintain they need some protection so that the supply does not get out of bounds and cut into the demand for local caught fish. Both parties recognize the fact that foreign sources can produce and sell their fish for less than the American fisherman.

It seems reasonable to believe that in the event frozen imports are not controlled, and enter this country in great volume, the American fisherman's production will not be sought. Since the average albacore fisherman is not financially able to forego a season's fishing, he must turn to other work. Eventually this would leave the market entirely to foreign sources of supply.

A factor not heretofore much discussed publicly is the potent fact that foreign producers would process their own catches and export the finished product to this country. Such a measure is not outside the realm of sound reasoning, should foreign sources gain control of the entire marketable catch, either here or abroad. This could even idle American canneries, since it would gradually eliminate the American tuna fishing fleets.

Research

Very little is known of the spawning or migratory habits of the albacore. The United States Fish and Wildlife Service is attempting to make a study of this specie of tunafish, but is seriously handicapped by a shortage of funds. Until last year it was not known if the American and Japanese fleets were fishing the same schools of albacore.

While there is nothing definite on that score, one albacore tagged by the FWS off Catalina Island made its way to within 500 miles of Tokyo less than one year later. One fish may not be considered proof of the action of a school, although the albacore is a school fish. According to scientific sources, the ocean currents were far from normal this year, resulting in the American fleet traveling far greater distances and covering much larger areas this season to locate the albacore.

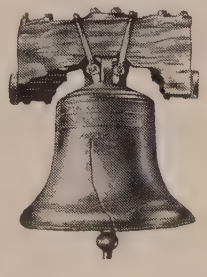
The matter of depletion of the albacore has not yet come up for discussion. Judging from the size of the fish brought in this year, coupled with the abnormal currents, there is little basis to fear depletion. Certainly American methods of fishing for albacore are not likely to become a factor contributing to their depletion.

Catch

The 1953 albacore catch was, according to the fall reports, about equal to that of 1952. The tonnage returns are not yet in from the northern part of California, where most of the albacore was delivered after September 30. It is believed, however, that the total tonnage will fall below that of last year. The per-vessel catch in 1953 was from 10 to 40% below last year, although a greater number of fishing vessels could make up the difference.

Future

With the steady market albacore now enjoys, and with the hope something may be done in the way of protection on imports of both canned and frozen fish, the future appears to be somewhat brighter for the American fisherman. The latter are quite willing to go far afield for their production if necessary, but they are anxious for other segments of the industry to show good faith in cooperation on mutual problems. *Let us not import unemployment; let us supplement, not supplant, American production.* ★



Sound Film on Diesel Cylinder Repairs

A new strip film with sound, entitled "Servicing the Series '71' Cylinder" has been released by the Service Department of the Detroit Diesel Engine Division of General Motors.

The film, obtainable from Detroit Diesel distributors and dealers, covers inspection procedures to be followed in determining the re-usability of cylinder parts during engine overhaul and the step by step processing needed to restore such parts to factory-set standards.

The information presents an effective training aid for mechanics in the Division's service outlets and for contractors and fleet operators maintaining their own repair facilities.

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—Report No. 393, Fish and Wildlife Service United States Department of the Interior

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ORANGE • CALIFORNIA

REPORT FROM WASHINGTON

(Continued from page 8)

SHRIMP TARIFF LEGISLATION.--Also carried over from last session are the following bills to provide duties on imported shrimp:

H.R 1424, by Rep. Willis of Louisiana calling for a 35 per cent ad valorem duty on the import of shrimp.

--o--

TROUT LABELLING BILL.--One fishing bill that should arouse no controversy in Congress this session is the trout labelling bill, S. 2033, which passed the Senate last year without an objection . . . it should have easy sailing in the House.

The bill doesn't call for a duty, just wants imported trout, except lake trout from Canada, to be labelled in type not smaller than 20 point showing the kind of trout and the country it came from. The bill also covers chars, which are a kind of trout.

This would affect imports from Denmark and Japan estimated at around $10 million yearly. Canadian trout were exempted on the ground they were of quality equal to American trout.

--o--

FROM FARM TO FISHERIES.--Senator Leverett Saltonstall has discovered an ingenious way to increase funds for the Fish and Wildlife Service--if it works. He has drafted a bill to transfer certain funds from the Department of Agriculture for this pupose.

The proposal seems logical enough. The sought-after funds are derived from customs receipts on fishery products imported into the United States.

If the Senator can get such a proposal passed over the heads of the farm bloc in Congress it would mean an annual fund of $3 million to $4 million for fisheries research instead of the $175,000 now appropriated. Agriculture is getting the difference now instead of fisheries.

--o--

SPORT TUNA FISHING?--According to a report recently circulated by the U.S. Chamber of Commerce, sport fishermen are cutting seriously into the business of the commercial fishing industry. We made a quick check on this. They didn't mean tuna fishing, they said.

--o--

RAIL REFRIGERATION CHARGES.--The possibility of increased charges for protective services by the railroads is almost a year away, best estimates of traffic experts here indicate. And even then, they are not certain.

Reason for the delayed outlook is a series of regional hearings held across the country by Interstate Commerce Commission for the purpose of taking testimony from both petitioners and protestants on the carriers' request for higher refrigeration rates.

First hearings opened in Washington, December 9. Hearings coming up later will be held February 9, again in Washington; March 16 in Orlando, Florida; and on dates not yet set in Harlingen, Texas; San Francisco, California; and Chicago, Illinois.

Traffic men say the hearings could be stretched out as long as a year. In the meantime, a change in the general price level of tuna, fish or other perishables, or increases in per-car loadings which affect rates, could force the Commission to deny the rail's request.

Pan American view, however, is that for the time being this is only a hope. But the prolonged hearings will keep away any hikes in fees until the problem is settled.

--o--

CONTAINERS HIT NEW HIGH.--A heavy volume of business in the third quarter indicates the container business in 1953 reached a record level, the U.S. Department of Commerce reports.

At the same time, the Department noted, business operations in that period were not without signs indicating a levelling-off. These were seen in such re-adjustment factors as greater finished inventories in the hands of manufacturers, increased order cancellations, and a stretch-out of defense contracts.

However, marketing specialists here don't see the situation as alarming. Most expect the increased trend toward packaging plus the increase in population to more than take up any approaching levelling-off.

--o--

BACK TO PRIVATE INDUSTRY?--Reports received here from London indicate the British Ministry of Food will make one final Government buy of canned salmon, then return British procurement to private industry.

The report didn't make clear when decontrol would take place nor how much salmon was to be purchased. It did indicate, however, that bids from American salmon interests would be considered.

--o--

SARDINE RESEARCH PROPOSED.--Maine State Senators have announced a proposal to develop long-range research to aid the sagging sardine industry in the North Atlantic, which, the Senators said, "has been hit hard by the effects of this year's run . . ."

Senators Margaret Chase Smith and Frederick G. Payne said the research would seek to plot scarcity and plentifulness of sardine schools ahead so that the industry could plan and prepare accordingly.

Interior Department officials estimated the operating budget of such a program to be about $116,000 a year. In announcing their proposal, the Senators referred to research now under way to help ground fish and haddock.

The legislators also referred to California, where "a combined Federal-State research program, with the fishing industry also contributing to cost payments, has totaled $750,000 a year and has been very successful in locating means of restoring a fishing industry, almost defunct because of the disappearance of the main fish source."

Modern Tuna Boat Construction

(Continued from page 15)

seas, and many a storm has seen the clipper riding it out more easily than a large cargo ship.

Stability

There have been times, during the development of tuna clippers, where they were unstable and unsafe. This resulted from efforts to build a more efficient fishing vessel without due regard for its stability as a sea-going vessel. As the tuna fishery expanded, it became expedient to travel farther and farther from port to locate larger schools of tuna.

They built larger boats to carry them on these long voyages and moved the engine as far forward as possible to make room in the hold to carry more fish. They took along crushed ice to refrigerate the fish and preserve them during these long trips. Accommodations for additional crew members were built into the house on deck, and a bait boy was built onto the stern to carry additional supplies and catch more fish.

In the period from 1926 to 1930, this trend resulted in a building boom of long range clippers up to 130

feet in length. These were flush deck vessels with a deck house for the crews and above this the pilot house. The mast was located with a boom amidships, and the larger bait storage box occupied the stern.

The need for more bait capacity increased proportionately with the size and range of the vessels. Designers built into the vessels two additional water-tight wells into part of the hold to be used for this purpose. This design was satisfactory from a stability standpoint, but the operators were inconvenienced by having to transfer bait more frequently during fishing operations to the boxes on the deck, as well as transfer ice from these points. Hence, many vessel-owners changed this arrangement by eliminating the bait wells in the holds, as bait wells, and installed a third large box on the deck to carry the bait. The result was a top-heavy vessel.

Two of these vessels capsized, and another was lost with all hands. The others were kept afloat and fishing mainly through the constant vigilance and ability of their skippers and crews. This series of disasters put a stop to such changes, and induced insurance underwriters to require stability tests on tuna clippers. Through the years the bait carrying requirements have increased three-fold, and designers have accomplished this without sacrifice of stability or safety.

(To be continued next issue)

Lenten Campaign for Fish

From late February to Easter Sunday housewives all over the country will be under a continuous barrage of messages on "eat fish," including canned tuna and canned salmon. The program includes plans for the use of newspapers, magazines, radio and TV.

The U. S. Fish and Wildlife Service, in its home economics activities, has prepared and published several tasty, economical, and attractive recipes for use by housewives and institutional menu planners.

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The GLOBE

An International News File Compiled from FOREIGN REPORTS

Brazil.—The fishery biologist, fishery technologist and master fisherman, who have been invited by the Government of Brazil to assist in its programme of marine fishery development, will be recruited in 1954 for assignment in July.

Canada.—Canada has been studying the question of territorial waters and the Canadian Minister of Fisheries is reported to favor a territorial ocean belt extending seaward 12 miles rather than the present one extending seaward 3 miles. Questioned in Tokyo on a recent trip there, regarding Korean restrictions on Japanese fishermen, the Minister is reported to have stated that while he did not wish to become involved in the controversy, it was Canada's view that establishing a fishery line on the high seas beyond a nation's territorial waters could not be effected unilaterally by one nation.

Denmark.—Danish production of fish meal in 1953 was about 20,000 metric tons as compared to 18,295 tons in 1952 and 14,680 tons in 1951, reports a Danish fishery magazine published in Copenhagen. Most of the meal is produced from herring although other species are beginning to be utilized. About 6,000 tons of herring meal were exported in 1952, more than half of which went to the United States.

England.—Trials with underwater television have provided new information about the sea floor, says the British Institute of Oceanography. Equipment developed by the Admiralty in Royal Research ships show that the technique is valuable, especially if used in conjunction with other gear. Shoals of fish have been seen on several occasions; also plankton organism. Observations on the sea bottom were made in waters from 33 to 80 fathoms deep.

Greenland.—An unusually rich ocean perch fishery has been developed in West Greenland by Icelandic trawlers and record catches have been made. A number of fishing vessels have gone to West Greenland to fish for ocean perch, which will be filleted and shipped to the Russian market in accordance with provisions of the Russian-Icelandic trade agreement.

Iceland.—The attempt to beat the ban on Icelandic-caught fish in Britain by a London businessman has been tougher than he anticipated, reports a British trade magazine. The London businessman, after contacting parties in Belgium, Norway, and Denmark in attempts to purchase fish, commented: "Their prices are a bit high but I think I can do business with them." The Norwegians have indicated that they can sell more fish than they can catch.

Japan.—Judging from past statistics, the winter albacore fishery is expected to produce about 15,000 tons of exportable tuna. The freezers are hoping for a quota increase of around 8,000 tons, and the canners desire a considerable export quota, keeping some "running stock" ready for export in April and May.

Japan.—The Japanese tuna fishery plans to build 230 steel vessels with a total tonnage of 61,500 tons, and 1,280 wooden vessels totaling 107,400 tons, in the period from 1954 to 1958. At the end of 1952 there were 1,165 tuna boats (103,814 tons); and by the end of 1958 there will be 2,225 tuna boats (231,320 tons) in the Japanese fishery. The planned cost of this construction will be 2.1 billion yen (US$5.8 million) for the steel vessels, and 3.5 billion yen (US$9.8 million) for the wooden vessels, to be financed for the most part by the Japanese government. The tuna production goal for 1958 is 552,775 metric tons as compared with 237,026 tons in 1952.

Norway.—A new type of marine research vessel, built in Norway, is on its way to India, as part of the efforts of the Norwegian fund to aid India. Made of aluminum, the flat-bottomed 90-foot cruiser features a specially designed propeller-well protected by two sturdy runners. Thus, the vessel can be safely launched or landed on a sandy shore, even in heavy breakers. Equipped with radiotelephone, echo depth sounder, and windlass, the research vessel will be used to take soundings and samples of the sea bottom, and test various types of fishing gear.

Portugal.—Catches of fish for canning were reported below normal this past season in southern Portugal and in northern Portugal (where production is usually heavy). With falling prices and sizable stocks on hand, packers are said to be seeking official action to stabilize and regulate production and sales.

Sweden.—A Goteborg manufacturer has signed a contract with the German inventor of the "tuna shock," an electrical tuna-fishing device. The Swedish manufacturer will make about 200 units each year, mostly for export. Last season only 30 units were produced. About 10 Swedish fishing vessels have tried the method and seem satisfied. With the electric "tuna shock" unit three lines can be fished at the same time. The lines have floats in different colors and when one of the floats disappears indicating a bite, the electric current, which renders the fish unconscious is connected by pressing a contact button.

Japanese Fisheries

(Continued from page 11)

The tuna caught by motherships is caught primarily for the United States market, mostly yellowfin and big-eye. Since it is all frozen and frozen yellowfin and big-eye does not bring good prices on the Japanese market, the price for mothership tuna is established by the U.S. market. Mothership tuna, since the method is still experimental in Japan, has been relieved of the legal necessity for going at public auction.

It is contracted for by U.S. canners on a price basis which puts it here at the same price as our yellowfin, or reasonably close thereto. The price situation is somewhat complicated by th e fact that some mothership tuna is processed into the loin stage before freezing and the remainder is gilled and gutted.

Motherships produced about 4,000 tons of exportable tuna last year. This year there will be two additional expeditions which may raise the total exportable tuna to 5,500 or 6,000 tons. There is no wild rush to expand the mothership branch of the tuna industry.

Both of the new expeditions are motherships which will operate normally in the salmon and crab fisheries of the North Pacific and make one tuna trip per year only. There does not appear to be any high rate of profit in this branch of the fishery. The Japanese say that it is a narrow profit, high-risk business in which little would be done if it were not that the vessels involved can operate seasonally in more profitable fisheries, i.e., salmon, crab or whale.

Bulletin on Corrosion

"How to Control Marine Corrosion with Galvanic Anodes" is the subject of Bulletin No. 161 now available from Federated Metals Division, American Smelting and Refining Company, 120 Broadway, New York 5, N. Y. The cost of corrosion to the marine industry runs into millions of dollars annually.

One of its most common results is the severe pitting of hulls and deterioration of bulkheads in ballast compartments, necessitating costly maintenance and premature replacement of steel plates. Corrosion of steel submerged in sea water is primarily an electro-chemical phenomenon and can be effectively controlled through the use of galvanic anodes.

The bulletin points out many of the factors which cause corrosion and describes how galvanic anodes are used in corrosion control systems for both ballast compartments and external hull surfaces.

Howad T. Burge

Funeral services for Howard T. Burge, 49, pioneer frozen food broker, were held January 8 at Forest Lawn Memorial Park, Glendale, Calif. Mr. Burge passed away at his home after a long illness.

He founded the Howard T. Burge Company in 1933, and pioneered the sale of packaged fruits, vegetables, and seafood in Southern California. In recent years he confined his activities primarily to the sale of frozen fishery products, and is well known in this industry.

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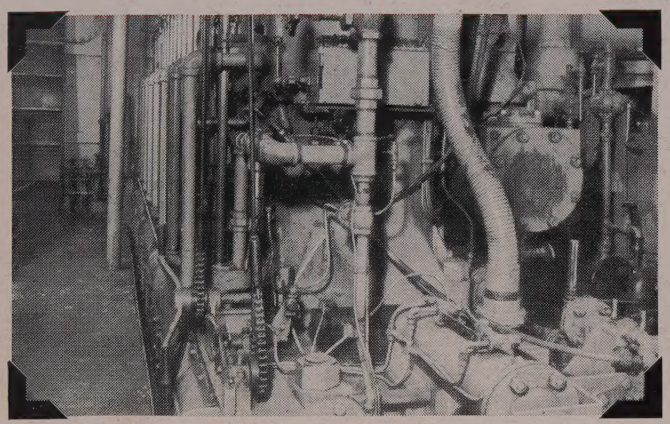

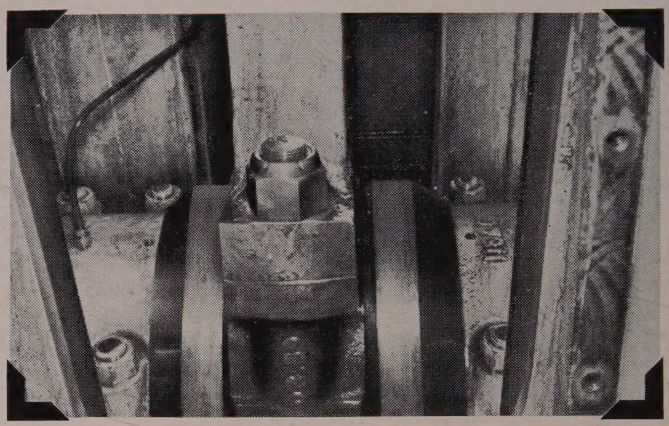

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